

Tooling Directory







Introduction

The Aerospace Technology Institute (ATI) welcomed tooling end users and suppliers to an online workshop in April 2021 to discuss the current and future needs of the tooling requirements in aerospace. This event attracted a total of 102 attendees including representatives from 71 tooling companies. The workshop featured 33 guest speakers, presenters and chairs from trade bodies, RTOs, and industry.

This directory is a result of that workshop and provides a view of the UK's capabilities and potential tooling providers for future R&D and production opportunities.

To support the Aerospace Growth Partnership's (AGP) request for action to address the gaps and future requirements of the industry, the ATI initiated a tooling working group which ran from March 2020 to November 2020. The working group consisted of a combination of tooling suppliers, end-users, and research technology organisations. The working group was successful in delivering an industry-led document of aerospace tooling requirements and challenges, a technology roadmap and a list of priority topic areas that formed the building blocks of the tooling workshop.

The ATI remains committed to supporting the tooling industry to develop innovative technologies to meet challenges for future aerostructures through our funding projects. **Companies with R&D projects are encouraged to get in touch with the ATI to find out more about how to get access to our existing funding programs.**



Company Name		First Name	Surname	
Aertec Solutions		Nathan	Ogden	
TOOLING SPECIALITIES		TOOLING SERVICE	S	
Assembly and fixture tooling	ullet	Ancillary tooling suppliers		
Bespoke complex tooling	•	(eg vac bags, tapes)		
Dies and cutting tools		Associations, Third Partie Services & Consultants	eS,	
Inflatable mandrels		Devices and sensors for p	process	
Large scale tools (greater than 10m)		measurement and management		
Press moulding		(metrology, process measurement, et		
Rapid product development	lacksquare	RTOs and academia		
Reconfigurable tooling	•	Tooling designer		
Reusable silicone testing		Tooling manufacturer		
Self-heated tooling		Tooling end-user		
Smart tooling		Tooling integrator		
Systems, robotic and automation	•	Tooling material supplier		
Other:				

nogden@aertecsolutions.com	
PRODUCTS	
Cabin interiors	
Empennage	
Engine components	
Fan/propeller/rotor system	
Fuselage	
Landing gear systems	
Nacelle & pylon	
Wings	ullet
Other:	

Email

0





Company Name		First Name	Surname		Email
Ai Build Ltd		Daghan	Cam		d.cam@ai-build.com
TOOLING SPECIALITIES		TOOLING SERVICE	S		PRODUCTS
Assembly and fixture tooling	\bullet	Ancillary tooling suppliers			Cabin interiors
Bespoke complex tooling	•	(eg vac bags, tapes)			Empennage
Dies and cutting tools		Associations, Third Parties, Services & Consultants			Engine components
Inflatable mandrels		Devices and sensors for process measurement and management (<i>metrology, process measurement, etc</i>)			Fan/propeller/rotor s
Large scale tools (greater than 10m)	lacksquare				Fuselage
Press moulding					Landing gear systems
Rapid product development		RTOs and academia			Nacelle & pylon
Reconfigurable tooling		Tooling designer			Wings
Reusable silicone testing		Tooling manufacturer		\bullet	Other:
Self-heated tooling		Tooling end-user			
Smart tooling		Tooling integrator			
Systems, robotic and automation		Tooling material supplier			
Other: Additive tooling					

PRODUCTS	
Cabin interiors	ullet
Empennage	
Engine components	ullet
Fan/propeller/rotor system	
Fuselage	
Landing gear systems	
Nacelle & pylon	
Wings	ullet
Other:	

Additional Information

Ai Build is a technology company specializing in large scale additive manufacturing for composite tooling in Aerospace/Automotive/F1 industries. Using our technology reduces the cost and production times significantly. Our R&D factory is located in East London, available for proof of concept production of additive tooling.



AEROSPACE TECHNOLOGY INSTITUTE

Company Name		First Name	Surname		
AMRC, University of Sheffield		Rob	Hewison	n	
TOOLING SPECIALITIES		TOOLING SERVI	CES		
Assembly and fixture tooling		Ancillary tooling suppliers			
Bespoke complex tooling		(eg vac bags, tapes)			
Dies and cutting tools	\bullet	Associations, Third Pa Services & Consultant			
Inflatable mandrels		Devices and sensors for process measurement and management			
Large scale tools (greater than 10m)					
Press moulding	\bullet	(metrology, process measurement, etc)			
Rapid product development		RTOs and academia		ullet	
Reconfigurable tooling		Tooling designer			
Reusable silicone testing		Tooling manufacturer			
Self-heated tooling		Tooling end-user			
Smart tooling		Tooling integrator			
Systems, robotic and automation	\bullet	Tooling material supp	lier		
Other:					

PRODUCTS	
Cabin interiors	ullet
Empennage	ullet
Engine components	$oldsymbol{0}$
Fan/propeller/rotor system	ullet
Fuselage	$oldsymbol{0}$
Landing gear systems	ullet
Nacelle & pylon	$oldsymbol{0}$
Wings	ullet
Other:	

Email

r.hewison@amrc.co.uk

Additional Information

Please visit **www.amrc.co.uk** for a general view of our capabilities and contact me directly if you have any enquiries.



Other: Additively Manufactured Tooling



Company Name		First Name	Surname				
Ascent Aerospace		George	Kenny				
TOOLING SPECIALITIES		TOOLING SERVIC	ES				
Assembly and fixture tooling	ullet	Ancillary tooling suppli	ers				
Bespoke complex tooling	\bullet	(eg vac bags, tapes)					
Dies and cutting tools		Associations, Third Part Services & Consultants					
Inflatable mandrels		Devices and sensors for process					
Large scale tools (greater than 10m)	lacksquare	measurement and management					
Press moulding	\bullet	(metrology, process measurement,					
Rapid product development	lacksquare	RTOs and academia					
Reconfigurable tooling	•	Tooling designer					
Reusable silicone testing		Tooling manufacturer					
Self-heated tooling	\bullet	Tooling end-user					
Smart tooling	lacksquare	Tooling integrator					
Systems, robotic and automation	•	Tooling material supplie	er				

Email

george.kenny@ascentaerospace.com

PRODUCTS

Cabin interiors	lacksquare
Empennage	\bullet
Engine components	
Fan/propeller/rotor system	
Fuselage	ullet
Landing gear systems	
Nacelle & pylon	ullet
Wings	ullet
Other:	





Company Name	First Name	Surname		Email
Axillium Group	Will	Searle		Will.Searle@Axillium.com
TOOLING SPECIALITIES	TOOLING SER	VICES		PRODUCTS
Assembly and fixture tooling		Ancillary tooling suppliers		Cabin interiors
Bespoke complex tooling	(eg vac bags, tapes	3)		Empennage
Dies and cutting tools	Associations, Third Services & Consult		ullet	Engine components
Inflatable mandrels	Devices and senso	Devices and sensors for process measurement and management (<i>metrology, process measurement, etc</i>)		Fan/propeller/rotor system
Large scale tools (greater than 10m)	measurement and			Fuselage
Press moulding	(metrology, proces			Landing gear systems
Rapid product development	RTOs and academi	a	ullet	Nacelle & pylon
Reconfigurable tooling	Tooling designer			Wings
Reusable silicone testing	Tooling manufactu	Irer		Other: R&D Development of high rate
Self-heated tooling	Tooling end-user	Tooling end-user		products
Smart tooling	Tooling integrator		0	
Systems, robotic and automation	Tooling material su	ıpplier		
Other: R&D Development of high rate tool	ing			

Additional Information

Axillium are an end-to-end Innovation Management Partner. We help knowledge-intensive companies collaborate and innovate across Aerospace, Automotive & Defence.



		First Name	Surname	
Company Name				
Carbon ThreeSixty Ltd		Garry	Scott	
TOOLING SPECIALITIES		TOOLING SERVIC	ES	
Assembly and fixture tooling	ullet	Ancillary tooling supplie	ers	
Bespoke complex tooling	\bullet	(eg vac bags, tapes)		
Dies and cutting tools		Associations, Third Part Services & Consultants	ies,	
Inflatable mandrels		Devices and sensors for	rocess	
Large scale tools (greater than 10m)	measurement and mar		nagement	
Press moulding	\bullet	(metrology, process measureme		
Rapid product development	ullet	RTOs and academia		
Reconfigurable tooling		Tooling designer		
Reusable silicone testing	lacksquare	Tooling manufacturer		
Self-heated tooling	\bullet	Tooling end-user		
Smart tooling		Tooling integrator		
Systems, robotic and automation		Tooling material supplie	er	
Other:				

t Name	Surname		Email
¥	Scott		garry.sc
OLING SERVICE	S		PROD
llary tooling suppliers /ac bags, tapes)	5		Cabin ir
			Empen
ociations, Third Partie ices & Consultants	S,	\bullet	Engine
ces and sensors for p	process		Fan/pro
surement and managetrology, process mea		Fuselag	
nology, process mea	Surement, etc)		Landing
s and academia		\bullet	Nacelle
ing designer		ullet	Wings
ing manufacturer		\bullet	Other:
ing end-user		ullet	
ing integrator			
ing material supplier			

garry.scott@carbonthreesixty.com

PRODUCTS	
Cabin interiors	ullet
Empennage	
Engine components	
Fan/propeller/rotor system	ullet
Fuselage	
Landing gear systems	
Nacelle & pylon	
Wings	
Other:	

Additional Information

Carbon ThreeSixty are specialists in composite liquid moulding technologies from low to high volume.



Company Name	First Name
CFP Composites Ltd	Stephen
TOOLING SPECIALITIES	TOOLING SERVI
Assembly and fixture tooling	Ancillary tooling supp
Bespoke complex tooling	(eg vac bags, tapes)
Dies and cutting tools	Associations, Third Pa Services & Consultan
Inflatable mandrels	Devices and sensors f
Large scale tools (greater than 10m)	measurement and ma
Press moulding	(metrology, process r
Rapid product development	RTOs and academia
Reconfigurable tooling	Tooling designer
Reusable silicone testing	Tooling manufacture
Self-heated tooling	Tooling end-user
Smart tooling	Tooling integrator
Systems, robotic and automation	Tooling material supp

Systems, robotic and automation

Other: Direct to Part Machinable Carbon Tooling Material - (360) for the manufacture of above type tools plus much more.

First Name	Surname	
Stephen	Philipson	
TOOLING SERVICE	S	
Ancillary tooling supplier (<i>eg vac bags, tapes</i>)	S	
Associations, Third Partie Services & Consultants	es,	
Devices and sensors for p measurement and mana (<i>metrology, process mea</i>	gement	
RTOs and academia		
Tooling designer		
Tooling manufacturer		
Tooling end-user		
Tooling integrator		
Tooling material supplier		

Email

UAV structures.

stephen.philipson@cfpcomposites.com

PRODUCTS	
Cabin interiors	lacksquare
Empennage	
Engine components	ullet
Fan/propeller/rotor system	
Fuselage	ullet
Landing gear systems	
Nacelle & pylon	
Wings	
Other: Product used to make mould tools for the above type of components including	





Company Name	F
Codem Composites Ltd	K
TOOLING SPECIALITIES	Г
Assembly and fixture tooling	A
Bespoke complex tooling	(6
Dies and cutting tools	A S
Inflatable mandrels	D
Large scale tools (greater than 10m)	m
Press moulding	(r
Rapid product development	R
Reconfigurable tooling	Т
Reusable silicone testing	Т
Self-heated tooling	Т
Smart tooling	Т
Systems, robotic and automation	Т

Other:

irst Name	
<i>Č</i> evin	

Surname Doherty

ТО	01	NG	i SE	•	VI	CI	ES	5	
			oling s, tap			lie	rs		

Associations, Third Parties, Services & Consultants

Devices and sensors for process measurement and management *(metrology, process measurement, etc*)

RTOs and academia Fooling designer

Tooling manufacturer

Tooling end-user

Tooling integrator

Tooling material supplier

PRODUCTS

PRODUCIS	
Cabin interiors	ullet
Empennage	ullet
Engine components	
Fan/propeller/rotor system	
Fuselage	ullet
Landing gear systems	
Nacelle & pylon	ullet
Wings	ullet
Other:	



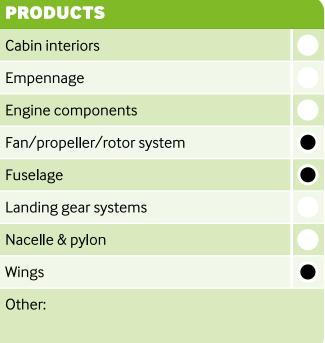


Company Name		First Name	Surname		Email
Composites Evolution		Roger	Elliott		roger.elliott@compositesevolution.com
TOOLING SPECIALITIES		TOOLING SERV	CES		PRODUCTS
Assembly and fixture tooling		Ancillary tooling suppliers			Cabin interiors
Bespoke complex tooling		(eg vac bags, tapes)	(eg vac bags, tapes)		Empennage
Dies and cutting tools		Associations, Third Parties, Services & Consultants			Engine components
nflatable mandrels		Devices and sensors for process measurement and management (<i>metrology, process measurement, etc</i>)			Fan/propeller/rotor system
arge scale tools (greater than 10m)					Fuselage
Press moulding	\bullet				Landing gear systems
Rapid product development		RTOs and academia			Nacelle & pylon
Reconfigurable tooling		Tooling designer			Wings
Reusable silicone testing		Tooling manufacture	Tooling manufacturer		Other:
Self-heated tooling		Tooling end-user			
Smart tooling		Tooling integrator		\bullet	
Systems, robotic and automation		Tooling material supp	blier		
Other:					

PRODUCTS	
Cabin interiors	•
Empennage	
Engine components	
Fan/propeller/rotor system	
Fuselage	
Landing gear systems	
Nacelle & pylon	
Wings	
Other:	



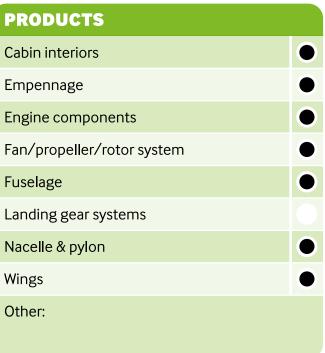
Company Name		First Name	Surname		Email
Cronite Castings Ltd		Peter	White		peter.whiteQcronite-group.com
TOOLING SPECIALITIES		TOOLING SERVIO	ES		PRODUCTS
Assembly and fixture tooling		Ancillary tooling suppl	ers		Cabin interiors
espoke complex tooling		(eg vac bags, tapes)			Empennage
Dies and cutting tools		Associations, Third Parties, Services & Consultants			Engine components
nflatable mandrels		Devices and sensors for process measurement and management (<i>metrology, process measurement, etc</i>)			Fan/propeller/rotor system
arge scale tools (greater than 10m)					Fuselage
Press moulding	\bullet				Landing gear systems
apid product development		RTOs and academia			Nacelle & pylon
Reconfigurable tooling		Tooling designer			Wings
Reusable silicone testing		Tooling manufacturer		\bullet	Other:
Self-heated tooling		Tooling end-user			
Smart tooling		Tooling integrator		0	
Systems, robotic and automation		Tooling material suppl	er		
Other:					







Company Name	First Name	Surname		Email
Datum Tool Design	Michael	Maguire		michael(qdatum-design.com
TOOLING SPECIALITIES	TOOLING SERV	ICES		PRODUCTS
Assembly and fixture tooling	Ancillary tooling sup	pliers		Cabin interiors
Bespoke complex tooling	(eg vac bags, tapes)	(eg vac bags, tapes)		Empennage
Dies and cutting tools	Associations, Third F Services & Consultar		ullet	Engine components
Inflatable mandrels	Devices and sensors	for process		Fan/propeller/rotor system
Large scale tools (greater than 10m)	measurement and m	measurement and management (<i>metrology, process measurement, etc</i>)		Fuselage
Press moulding	(metrology, process			Landing gear systems
Rapid product development	RTOs and academia			Nacelle & pylon
Reconfigurable tooling	Tooling designer		ullet	Wings
Reusable silicone testing	Tooling manufacture	er	\bullet	Other:
Self-heated tooling	Tooling end-user			
Smart tooling	Tooling integrator			
Systems, robotic and automation	Tooling material sup	plier	ullet	
Other:				







Company Name		First Name	Surname		Email
Desoutter UK		Scott	Howard		<u>scott.ho</u>
TOOLING SDECIALITIES		TOOLING SERVI	050		BBOD
TOOLING SPECIALITIES		TOOLING SERVI	CES		PROD
Assembly and fixture tooling	lacksquare	Ancillary tooling supp	liers		Cabin ir
Bespoke complex tooling		(eg vac bags, tapes)			Empenr
Dies and cutting tools	ullet	Associations, Third Pa Services & Consultan			Engine
Inflatable mandrels		Devices and sensors for process			Fan/pro
Large scale tools (greater than 10m)		measurement and ma	and management		Fuselag
Press moulding		(metrology, process r	neasurement, etc)		Landing
Rapid product development		RTOs and academia			Nacelle
Reconfigurable tooling		Tooling designer			Wings
Reusable silicone testing		Tooling manufacture		\bullet	Other: S
Self-heated tooling		Tooling end-user			
Smart tooling	lacksquare	Tooling integrator			
Systems, robotic and automation		Tooling material supp	lier		
Other: Process control solutions					

cott.howard@desouttertools.com

RODUCTS abin interiors mpennage ngine components in/propeller/rotor system iselage anding gear systems acelle & pylon ings ther: Suppliers to all listed

Additional Information

Please see more detail at www.desouttertools.com or contact me on 07971 650556 as we have a dedicated team available to support you with their wealth of knowledge or in demonstrating our tooling and process control solutions.



Company Name	First Name	Surname		Email
DFS Composites Limited	Feras	Yosef		fer@dfscomposites.com
				PRODUCTO
TOOLING SPECIALITIES	TOOLING SER			PRODUCTS
Assembly and fixture tooling	, J			Cabin interiors
Bespoke complex tooling	(eg vac bags, tape	S)		Empennage
Dies and cutting tools	Associations, Third Services & Consul			Engine components
Inflatable mandrels	Devices and sense	ors for process		Fan/propeller/rotor system
Large scale tools (greater than 10m)	measurement and	measurement and management (<i>metrology, process measurement, etc</i>)		Fuselage
Press moulding	(metrology, proce	ss measurement, etc)		Landing gear systems
Rapid product development	RTOs and academ	ia		Nacelle & pylon
Reconfigurable tooling	Tooling designer		\bullet	Wings
Reusable silicone testing	Tooling manufactu	urer	\bullet	Other:
Self-heated tooling	Tooling end-user			
Smart tooling	Tooling integrator		\bullet	
Systems, robotic and automation	Tooling material s	upplier	\bullet	
Other:				



AEROSPA TECHNOL INSTITUT

Company Name	First Name	Surname		Email	
Expert Tooling & Automation	Richard	Weston		richard.weston@exta.co.uk	
TOOLING SPECIALITIES	TOOLING SERVICI	-6		PRODUCTS	
TOOLING SPECIALITIES	TOOLING SERVICE	-5		PRODUCTS	
Assembly and fixture tooling	Ancillary tooling supplie	rs		Cabin interiors	
Bespoke complex tooling	(eg vac bags, tapes)			Empennage	
Dies and cutting tools	Associations, Third Parti Services & Consultants	es,		Engine components	
Inflatable mandrels	Devices and sensors for process measurement and management (<i>metrology, process measurement, etc</i>)			Fan/propeller/rotor system	
Large scale tools (greater than 10m)				Fuselage	
Press moulding				Landing gear systems	
Rapid product development	RTOs and academia			Nacelle & pylon	
Reconfigurable tooling	Tooling designer		\bullet	Wings	
Reusable silicone testing	Tooling manufacturer		\bullet	Other: Rotor Assembly Facilities & Tooling	
Self-heated tooling	Tooling end-user				
Smart tooling	Tooling integrator		\bullet		
Systems, robotic and automation	Tooling material supplie	r	0		
Other: Composite Tooling & Assembly					

Additional Information

Expert Tooling & Automation is an established aerospace sector supplier in the UK, Europe and Asia, and a UK leader of manufacturing automation, tooling, special purpose machinery and multi-robotic turnkey systems. Building lasting relationships with customers is a cornerstone of our business. ETA develops production methods for manufacture and assembly systems for the production of clients' products, ranging from engine flow lines and workstations, MRO facilities, wing/fuselage/ribs/stringers assembly, robotic drilling and riveting, to small component assembly aids and fixtures. Our team of automation specialists and comprehensive facilities allow us to offer complete and bespoke solutions from design to installation. Our HQ is in Coventry, West Midlands.





Company Name		First Name	Surname
FDM DIGITAL SOLUTIONS LTD		Graeme	Bond
TOOLING SPECIALITIES		TOOLING SERVICE	S
Assembly and fixture tooling	lacksquare	Ancillary tooling supplier	ſS
Bespoke complex tooling	\bullet	(eg vac bags, tapes)	
Dies and cutting tools		Associations, Third Partie Services & Consultants	es,
Inflatable mandrels		Devices and sensors for	process
Large scale tools (greater than 10m)	measurement and management (metrology, process measurement		
Press moulding		(metrology, process mea	asurement, etc)
Rapid product development	ullet	RTOs and academia	
Reconfigurable tooling		Tooling designer	
Reusable silicone testing		Tooling manufacturer	
Self-heated tooling		Tooling end-user	
Smart tooling		Tooling integrator	
Systems, robotic and automation		Tooling material supplier	
Other:			

Email

graeme@fdmdigitalsolutioons.co.uk

PRODUCTS	
Cabin interiors	lacksquare
Empennage	
Engine components	
Fan/propeller/rotor system	
Fuselage	
Landing gear systems	
Nacelle & pylon	
Wings	
Other:	

Additional Information

FDM Digital Solutions specialise in high performance, high temperature large size 3D printing along with design and manufacture of jigs, low volume press tooling, low volume manufacture of aerospace approved 3D printed parts & design for Additive Manufacture. we have a large capacity of Stratasys & HP Multi-jet fusion polymer and metal 3D print technologies.



Company Name	First Name	Surname		Email
GTMA	Roger	Onions		Roger(qgtma.co.uk
TOOLING SPECIALITIES	TOOLING SERV	ICES		PRODUCTS
Assembly and fixture tooling	Ancillary tooling supp	oliers		Cabin interiors
Bespoke complex tooling	(eg vac bags, tapes)			Empennage
Dies and cutting tools	Associations, Third P Services & Consultan		\bullet	Engine components
Inflatable mandrels	Devices and sensors	Devices and sensors for process		Fan/propeller/rotor system
Large scale tools (greater than 10m)	measurement and m	anagement		Fuselage
Press moulding	(metrology, process i	measurement, etc)		Landing gear systems
Rapid product development	RTOs and academia			Nacelle & pylon
Reconfigurable tooling	Tooling designer			Wings
Reusable silicone testing	Tooling manufacture	r		Other: Our Membership
Self-heated tooling	Tooling end-user			
Smart tooling	Tooling integrator			
Systems, robotic and automation	Tooling material supp	blier		
Other: Our Membership				

Additional Information

The GTMA is a Trade Association and our members are involved in all of the above.

TECHNOLOGY INSTITUTE	Ú		
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Company Name		First Name	Surname		Email
Harcourt Industrial Inc		Tony	Van As		tony.vanas@harcourt.co
TOOLING SPECIALITIES		TOOLING SERVICI	-6		PRODUCTS
TOOLING SPECIALITIES		TUULING SERVICI	-5		PRODUCIS
Assembly and fixture tooling		Ancillary tooling supplie	ſS		Cabin interiors
Bespoke complex tooling	\bullet	(eg vac bags, tapes)			Empennage
Dies and cutting tools		Associations, Third Partie Services & Consultants	es,		Engine components
Inflatable mandrels		Devices and sensors for	process		Fan/propeller/rotor system
Large scale tools (greater than 10m)	lacksquare	measurement and management			Fuselage
Press moulding		(metrology, process mea	asurement, etc)		Landing gear systems
Rapid product development		RTOs and academia			Nacelle & pylon
Reconfigurable tooling	\bullet	Tooling designer		lacksquare	Wings
Reusable silicone testing		Tooling manufacturer		\bullet	Other:
Self-heated tooling		Tooling end-user			
Smart tooling		Tooling integrator		ullet	
Systems, robotic and automation		Tooling material supplier		lacksquare	
Other:					

Additional Information

Harcourt have developed a new system for aerospace assembly fixtures/jigs. Eliminates the cost and lead times associated with traditional fabricated tooling and is re-configurable/re-imaginable. Uses are (but not limited to) drill jigs, assembly tooling, friction stir weld fixtures.



Company Name	First Name	Surname		Email
Haydale	Matthew	Thornton		matthew.thornton@haydale.com
TOOLING SPECIALITIES	TOOLING SE	ERVICES		PRODUCTS
Assembly and fixture tooling	Ancillary tooling			Cabin interiors
Bespoke complex tooling	(eg vac bags, ta	Des)		Empennage
Dies and cutting tools	Associations, Th Services & Cons			Engine components
nflatable mandrels	Devices and ser	nsors for process		Fan/propeller/rotor system
arge scale tools (greater than 10m)	measurement a	measurement and management (<i>metrology, process measurement, etc</i>)		Fuselage
Press moulding	(metrology, pro			Landing gear systems
apid product development	RTOs and acade	mia		Nacelle & pylon
Reconfigurable tooling	Tooling designe	r		Wings
Reusable silicone testing	Tooling manufa	cturer		Other:
Self-heated tooling	• Tooling end-use	er		
Smart tooling	Tooling integrat	or		
Systems, robotic and automation	Tooling materia	l supplier	\bullet	
Other:				





Company Name	First Name	Surname		Email
Hyde Group Ltd	Paul	Cox		pcox@hydegroup.com
TOOLING SPECIALITIES	TOOLING SERVI	CES		PRODUCTS
Assembly and fixture tooling	Ancillary tooling supp	liers		Cabin interiors
Bespoke complex tooling	(eg vac bags, tapes)			Empennage
Dies and cutting tools	Associations, Third Pa Services & Consultan		\bullet	Engine components
Inflatable mandrels	Devices and sensors f	Devices and sensors for process measurement and management (<i>metrology, process measurement, etc</i>)		Fan/propeller/rotor sys
Large scale tools (greater than 10m)	measurement and ma			Fuselage
Press moulding	(metrology, process r			Landing gear systems
Rapid product development	RTOs and academia		\bullet	Nacelle & pylon
Reconfigurable tooling	Tooling designer		\bullet	Wings
Reusable silicone testing	Tooling manufacture		\bullet	Other:
Self-heated tooling	Tooling end-user			
Smart tooling	Tooling integrator		\bullet	
Systems, robotic and automation	Tooling material supp	lier		
Other:				

PRODUCTS	
Cabin interiors	
Empennage	\bullet
Engine components	$oldsymbol{0}$
Fan/propeller/rotor system	ullet
Fuselage	ullet
Landing gear systems	ullet
Nacelle & pylon	ullet
Wings	ullet
Other:	





Company Name		First Name
Investment Casting Systems Ltd		Richard
TOOLING SPECIALITIES		TOOLING
Assembly and fixture tooling	lacksquare	Ancillary tooli
Bespoke complex tooling	\bullet	(eg vac bags,
Dies and cutting tools		Associations, Services & Co
Inflatable mandrels		Devices and s
Large scale tools (greater than 10m)		measuremen (<i>metrology, p</i>
Press moulding	ullet	(menology, p
Rapid product development		RTOs and aca
Reconfigurable tooling		Tooling desig
Reusable silicone testing		Tooling manu
Self-heated tooling		Tooling end-u
Smart tooling		Tooling integ
Systems, robotic and automation		Tooling mate
Other:		

i ii St Nume	Sumanie	
Richard	Wilson	
TOOLING SERV	ICES	
Ancillary tooling sup (<i>eg vac bags, tapes</i>)	pliers	
Associations, Third F Services & Consultar		
Devices and sensors measurement and n (<i>metrology, process</i>	nanagement	
RTOs and academia		
Tooling designer		
Tooling manufacture	er	\bullet
Tooling end-user		
Tooling integrator		
Tooling material sup	plier	

Surname

richard@investmentcastingsystems.co.uk

Email

PRODUCTS	
Cabin interiors	lacksquare
Empennage	
Engine components	lacksquare
Fan/propeller/rotor system	
Fuselage	
Landing gear systems	
Nacelle & pylon	
Wings	
Other:	

Company Name

Jaivel Aerospace Limited

TOOLING SPECIALITIES

Large scale tools (greater than 10m)

Rapid product development

Reconfigurable tooling

Reusable silicone testing

Self-heated tooling

Smart tooling

Assembly and fixture tooling

Bespoke complex tooling

Dies and cutting tools

Inflatable mandrels

Press moulding

021						
		First Name	Surname		Email	
		Vipul	Vachhani		vipul@jaivel.com	
		TOOLING SERVICE	S		PRODUCTS	
		Ancillary tooling supplier	ſS		Cabin interiors	
		(eg vac bags, tapes)			Empennage	
		Associations, Third Partie Services & Consultants	es,		Engine components	
		Devices and sensors for	process		Fan/propeller/rotor system	
1)		measurement and mana	igement		Fuselage	
		(metrology, process mea	isurement, etc)		Landing gear systems	
	\bullet	RTOs and academia			Nacelle & pylon	
	\bullet	Tooling designer		\bullet	Wings	
		Tooling manufacturer		\bullet	Other:	
		Tooling end-user				
	\bullet	Tooling integrator		\bullet		
		Tooling material supplier	-			

Other:

Additional Information

Systems, robotic and automation

Jaivel Aerospace is a manufacturing technology organisation with expertise in improving performance of advanced manufacturing programs. The winning combination of our process and tooling businesses apply technology and innovation to improve performance of manufacturing operations, whilst our product business offers the option to make your product. Our team's relentless pursuit of offering simplified and intuitive solutions has inspired the trust of Global 10 aerospace clients. With one goal: enabling our customers to succeed, we measure our success by the value we create for our customers.







Company Name		First Name	Surname		En
Manufacturing Technology Centre		Sandeep	Samanthula		sar
TOOLING SPECIALITIES		TOOLING SERVICE	S		PI
Assembly and fixture tooling	\bullet	Ancillary tooling supplier	S		Ca
Bespoke complex tooling		(eg vac bags, tapes)			Em
Dies and cutting tools		Associations, Third Partie Services & Consultants	es,		En
Inflatable mandrels		Devices and sensors for p	process		Fa
Large scale tools (greater than 10m)		measurement and management (<i>metrology, process measurement, etc</i>)			Fu
Press moulding					La
Rapid product development	lacksquare	RTOs and academia		\bullet	Na
Reconfigurable tooling		Tooling designer		lacksquare	Wi
Reusable silicone testing		Tooling manufacturer		ullet	Ot
Self-heated tooling		Tooling end-user			
Smart tooling	ullet	Tooling integrator			
Systems, robotic and automation	\bullet	Tooling material supplier			
Other: Tooling repair					

Email

andeep.samanthula@the-mtc.org

RODUCTS Cabin interiors Empennage Engine components an/propeller/rotor system uselage anding gear systems lacelle & pylon Vings)ther:





Company Name		First Name	Surname
MetLase Ltd		Richard	Gould
TOOLING SPECIALITIES		TOOLING SERVIO	CES
Assembly and fixture tooling	\bullet	Ancillary tooling suppl	iers
Bespoke complex tooling	\bullet	(eg vac bags, tapes)	
Dies and cutting tools		Associations, Third Par Services & Consultants	
Inflatable mandrels		Devices and sensors fo	or process
Large scale tools (greater than 10m)		measurement and management (metrology, process measureme	
Press moulding		(metrology, process m	ieasurement, et
Rapid product development	\bullet	RTOs and academia	
Reconfigurable tooling	\bullet	Tooling designer	
Reusable silicone testing		Tooling manufacturer	
Self-heated tooling		Tooling end-user	
Smart tooling	\bullet	Tooling integrator	
Systems, robotic and automation	\bullet	Tooling material suppl	ier
Other:			

d	Gould		<u>ric</u>
LING SERV	ICES		P
ary tooling sup c bags, tapes)	pliers		Ca
			Er
iations, Third F es & Consultaı			Er
es and sensors	for process		Fa
urement and n		Fu	
biogy, process	measurement, etc)		La
and academia			Na
g designer		\bullet	Wi
g manufacture	er	\bullet	Ot
g end-user		\bullet	
g integrator		\bullet	
g material sup	plier		

ichard.gould@metlase.com

Email

RODUCTS Cabin interiors mpennage Ingine components an/propeller/rotor system uselage anding gear systems lacelle & pylon Vings)ther:





Company Name	First Name
National Composites Centre (NCC)	Enrique
TOOLING SPECIALITIES	TOOLING
Assembly and fixture tooling	Ancillary to
Bespoke complex tooling	(eg vac bag
Dies and cutting tools	Association Services & (
Inflatable mandrels	Devices and
Large scale tools (greater than 10m)	measureme (<i>metrology</i> ,
Press moulding	(metrology,
Rapid product development	RTOs and ad
Reconfigurable tooling	Tooling des
Reusable silicone testing	Tooling mai
Self-heated tooling	Tooling end
Smart tooling	Tooling inte
Systems, robotic and automation	Tooling mat
Other:	

First Name	Surname	
Enrique	Garcia	
TOOLING SERV	ICES	
Ancillary tooling sup (<i>eg vac bags, tapes</i>)	pliers	
Associations, Third F Services & Consultar		
Devices and sensors measurement and m (<i>metrology, process</i>	nanagement	
RTOs and academia		•
Tooling designer		
Tooling manufacture	er	
Tooling end-user		
Tooling integrator		
Tooling material sup	plier	

Email

enrique.garcia@nccuk.com

PRODUCTSCabin interiors.Empennage.Engine components.Fan/propeller/rotor system.Fuselage.Landing gear systems.Nacelle & pylon.Wings.Other:.

Ċ	AEROSPACE TECHNOLOGY INSTITUTE

Company Name	First Name	Surname		Email				
Neos International Limited	lan	lan Eaves		Eaves		an Eaves		lan.eaves@neosintl.com
TOOLING SPECIALITIES	TOOLING SERV	/ICES	PRODUCTS					
Assembly and fixture tooling	Ancillary tooling su	•		Cabin interiors				
Bespoke complex tooling	(eg vac bags, tapes)		Empennage					
Dies and cutting tools	Associations, Third Services & Consulta		Engine components					
Inflatable mandrels	Devices and sensor	s for process	Fan/propeller/rotor system					
Large scale tools (greater than 10m)	measurement and r	management		Fuselage				
Press moulding	(metrology, proces	s measurement, etc)		Landing gear systems				
Rapid product development	RTOs and academia	l de la constante de		Nacelle & pylon				
Reconfigurable tooling	Tooling designer		\bullet	Wings				
Reusable silicone testing	Tooling manufactur	er	\bullet	Other: Automotive & Nuclear applications				
Self-heated tooling	Tooling end-user							
Smart tooling	Tooling integrator		\bullet					
Systems, robotic and automation	Tooling material sup	oplier	\bullet					
Other: Large scale Additive Manufacturing								





Company Name		First Name	Surname		Email
NMIS		Crawford	Cullen		crawford.cullen@strath.ac.uk
TOOLING SPECIALITIES		TOOLING SERVIC	ES		PRODUCTS
Assembly and fixture tooling		Ancillary tooling supplie	ers		Cabin interiors
espoke complex tooling		(eg vac bags, tapes)			Empennage
ies and cutting tools		Associations, Third Part Services & Consultants	ies,		Engine components
nflatable mandrels		Devices and sensors for	process		Fan/propeller/rotor system
arge scale tools (greater than 10m)		measurement and management (<i>metrology, process measurement, etc</i>)			Fuselage
Press moulding					Landing gear systems
Rapid product development	lacksquare	RTOs and academia		ullet	Nacelle & pylon
Reconfigurable tooling		Tooling designer			Wings
Reusable silicone testing		Tooling manufacturer			Other:
Self-heated tooling		Tooling end-user			
Smart tooling		Tooling integrator			
Systems, robotic and automation		Tooling material supplie	er		
Other:					



Ĵ	 AEROSPACE TECHNOLOGY INSTITUTE

Company Name	
Northern Ireland Technology Centre, Queens Unive	ersity
TOOLING SDECIALITIES	
TOOLING SPECIALITIES	
Assembly and fixture tooling	
Bespoke complex tooling	
Dies and cutting tools	
Inflatable mandrels	
Large scale tools (greater than 10m)	
Press moulding	
Rapid product development	
Reconfigurable tooling	
Reusable silicone testing	
Self-heated tooling	
Smart tooling	
Systems, robotic and automation	
Other: Research	

	First Name	Surname	
sity	Colm	Higgins	
	TOOLING SERVIC	ES	
	Ancillary tooling suppli (<i>eg vac bags, tapes</i>)	ers	
	Associations, Third Par Services & Consultants		
	Devices and sensors for measurement and ma (<i>metrology, process m</i>	nagement	
	RTOs and academia		•
	Tooling designer		
	Tooling manufacturer		
	Tooling end-user		
	Tooling integrator		
	Tooling material suppli	er	

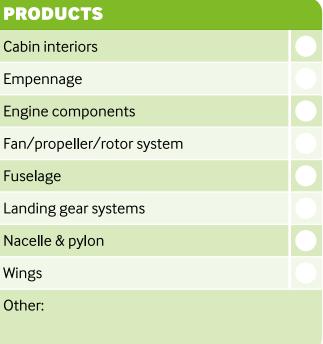
<u>c.j.higgins@qub.ac.uk</u>

Email

PRODUCTS	
Cabin interiors	
Empennage	
Engine components	
Fan/propeller/rotor system	
Fuselage	
Landing gear systems	
Nacelle & pylon	
Wings	
Other: Research	



Company Name		First Name	Surname		Email
Plyable		Elaine	Winchester		e.winchester@plyable.com
TOOLING SPECIALITIES		TOOLING SERV	/ICES		PRODUCTS
Assembly and fixture tooling	\bullet	Ancillary tooling su	-		Cabin interiors
Bespoke complex tooling		(eg vac bags, tapes)			Empennage
Dies and cutting tools		Associations, Third Services & Consulta			Engine components
Inflatable mandrels		Devices and sensors for process measurement and management (<i>metrology, process measurement, etc</i>)			Fan/propeller/rotor system
Large scale tools (greater than 10m)	\bullet				Fuselage
Press moulding					Landing gear systems
Rapid product development		RTOs and academia			Nacelle & pylon
Reconfigurable tooling		Tooling designer			Wings
Reusable silicone testing		Tooling manufactur	er	\bullet	Other:
Self-heated tooling		Tooling end-user			
Smart tooling		Tooling integrator			
Systems, robotic and automation		Tooling material sup	oplier		
Other:					







Company Name		First Name	Surname		Email
Prodtex		Ricky	Cartwright		ricky.Cartwright@Prodtex.com
TOOLING SPECIALITIES		TOOLING SERV	/ICES		PRODUCTS
Assembly and fixture tooling	lacksquare	Ancillary tooling su			Cabin interiors
espoke complex tooling	lacksquare	(eg vac bags, tapes)			Empennage
ies and cutting tools		Associations, Third Services & Consulta			Engine components
flatable mandrels		Devices and sensors for process measurement and management (<i>metrology, process measurement, etc</i>)			Fan/propeller/rotor system
rge scale tools (greater than 10m)					Fuselage
ress moulding					Landing gear systems
apid product development		RTOs and academia			Nacelle & pylon
econfigurable tooling	lacksquare	Tooling designer		\bullet	Wings
eusable silicone testing		Tooling manufactu	rer	\bullet	Other:
elf-heated tooling		Tooling end-user			
mart tooling	$oldsymbol{0}$	Tooling integrator		\bullet	
Systems, robotic and automation		Tooling material su	oplier		
Other:					

Additional Information

Prodtex develops innovative and sustainable industry 4.0 manufacturing solutions focused on next-gen manufacturing methods, processes, workflows, digital simulations and intelligent automation. Their solutions are proven across multiple sectors. Prodtex's steel reconfigurable BoxJoint fixturing technology is in use at the MTC and in multiple industries. Reconfigurable solutions save costs, shorten design and make manufacturing cells more flexible. Prodtex offer a design to delivery service for their reconfigurable technologies. Prodtex offers accurate, modular, affordable and reconfigurable robot solutions, such as the Hexapod and TAU robots. They also offer consultancy to demonstrate robotic applications, virtual commissioning, digital twin solutions and offline simulation within 3DEXPERIENCE DELMIA.





Company Name		First Name	Surname		Email
Productive Machines		Erdem	Ozturk		erdem@productivemachines.co.uk
TOOLING SPECIALITIES		TOOLING SERVIC	ES		PRODUCTS
Assembly and fixture tooling		Ancillary tooling suppli	ers		Cabin interiors
Bespoke complex tooling		(eg vac bags, tapes)			Empennage
Dies and cutting tools		Associations, Third Par Services & Consultants		\bullet	Engine components
Inflatable mandrels		Devices and sensors for process measurement and management (<i>metrology, process measurement, etc</i>)			Fan/propeller/rotor system
Large scale tools (greater than 10m)					Fuselage
Press moulding					Landing gear systems
Rapid product development		RTOs and academia			Nacelle & pylon
Reconfigurable tooling		Tooling designer			Wings
Reusable silicone testing		Tooling manufacturer			Other:
Self-heated tooling		Tooling end-user			
Smart tooling	lacksquare	Tooling integrator		0	
Systems, robotic and automation		Tooling material suppli	er		
Other:					

Additional Information

Productive Machines delivers software that maximises sustainability of machining processes by reducing costs, eliminating waste and improving productivity. By applying simulations in machining processes, production time can be reduced considerably. Our product is a digital twin based learning platform composed of three linked modules: learning system, CAM plugin and Edge application. The learning system includes key information such as tool, work piece and process knowledge. The CAM plugin is integrated into existing CAM software. It hosts an offline digital twin of the machining process which can be used to identify potential problems and take counter measures while optimising the process. The Edge application includes an online digital twin for process monitoring and control.





Company Name	First Name	e Surname		Email	
Scaled	Bob	Bob Bradley		bob.bradley@scal3d.com	
TOOLING SPECIALITIES	TOOLIN	G SERVICES		PRODUCTS	
Assembly and fixture tooling		oling suppliers		Cabin interiors	
Bespoke complex tooling	(eg vac bag	(s, tapes)		Empennage	•
Dies and cutting tools		ns, Third Parties, Consultants	•	Engine components	\bullet
nflatable mandrels	Devices and	d sensors for process		Fan/propeller/rotor system	•
arge scale tools (greater than 10m)	measureme	measurement and management		Fuselage	\bullet
Press moulding	(metrology	, process measurement, et	(C)	Landing gear systems	•
Rapid product development	RTOs and a	cademia		Nacelle & pylon	\bullet
Reconfigurable tooling	Tooling des	signer		Wings	•
Reusable silicone testing	Tooling ma	nufacturer		Other: We don't have a product re	
Self-heated tooling	Tooling end	Tooling end-user		starting to investigate this sector	r.
Smart tooling	Tooling inte	egrator			
Systems, robotic and automation	Tooling ma	terial supplier			
Other:					

Additional Information

We are investigating what value we can bring to the area of tooling, jigs and fixtures using our large-scale thermoplastic 3D printing technology for rapid product development.



Composite Tooling Materials and Solutions.



Company Name		First Name	Surname		Email
SHD Composites		Nigel	Blatherwick		nblatherwick@shdcomposites.com
TOOLING SPECIALITIES		TOOLING SERVIO	CES		PRODUCTS
Assembly and fixture tooling		Ancillary tooling suppl	iers		Cabin interiors
espoke complex tooling		(eg vac bags, tapes)			Empennage
Dies and cutting tools		Associations, Third Parties, Services & Consultants			Engine components
nflatable mandrels		Devices and sensors for process measurement and management (<i>metrology, process measurement, etc</i>)			Fan/propeller/rotor system
arge scale tools (greater than 10m)					Fuselage
Press moulding					Landing gear systems
apid product development		RTOs and academia			Nacelle & pylon
Reconfigurable tooling		Tooling designer			Wings
Reusable silicone testing		Tooling manufacturer			Other:
Self-heated tooling		Tooling end-user			
Smart tooling		Tooling integrator			
Systems, robotic and automation		Tooling material suppl	ier	\bullet	
Other: Low Cost , High Performance					

CLICK HERE For more info

Other:



Company Name		First Name		
Technical Composite Systems Ltd		Michael		
TOOLING SPECIALITIES		TOOLING SERVICES		
Assembly and fixture tooling	lacksquare	Ancillary tooling suppliers		
Bespoke complex tooling	\bullet	(eg vac bags, tapes)		
Dies and cutting tools		Associations, Third Parti Services & Consultants		
Inflatable mandrels		Devices and sensors for p		
Large scale tools (greater than 10m)		measurement and manag		
Press moulding	ullet	(metrology, process meas		
Rapid product development	lacksquare	RTOs and academia		
Reconfigurable tooling	ullet	Tooling designer		
Reusable silicone testing	ullet	Tooling manufacturer		
Self-heated tooling	ullet	Tooling end-user		
Smart tooling	lacksquare	Tooling integrator		
Systems, robotic and automation		Tooling material supplier		
Other				

First Name	Surname	
Michael	Sloan	
TOOLING SERV		
Ancillary tooling sup (<i>eg vac bags, tapes</i>)	pliers	
Associations, Third P Services & Consultar		
Devices and sensors measurement and m (<i>metrology, process</i>	nanagement	•
RTOs and academia		
Tooling designer		\bullet
Tooling manufacture	er	•
Tooling end-user		•
Tooling integrator		\bullet
Tooling material sup	plier	

Email

msloan@technicalcompositesystems.com

PRODUCTS	
Cabin interiors	ullet
Empennage	
Engine components	
Fan/propeller/rotor system	
Fuselage	
Landing gear systems	
Nacelle & pylon	
Wings	
Other:	



Other:



Company Name		First Name	Surname
Toray TAC		Jed	IIIsley
TOOLING SPECIALITIES		TOOLING SERVIC	ES
Assembly and fixture tooling	ullet	Ancillary tooling suppli	ers
Bespoke complex tooling	\bullet	(eg vac bags, tapes)	
Dies and cutting tools		Associations, Third Par Services & Consultants	
Inflatable mandrels		Devices and sensors fo	or process
Large scale tools (greater than 10m)	lacksquare	measurement and mai	nagement
Press moulding		(metrology, process m	easurement, et
Rapid product development	lacksquare	RTOs and academia	
Reconfigurable tooling	lacksquare	Tooling designer	
Reusable silicone testing		Tooling manufacturer	
Self-heated tooling	\bullet	Tooling end-user	
Smart tooling		Tooling integrator	
Systems, robotic and automation		Tooling material suppli	er
Other			

j.illsley@toraytac-europe.com PRODUCTS Cabin interiors Empennage Engine components Fan/propeller/rotor system Fuselage Landing gear systems Nacelle & pylon Wings Other:

Email

etc)



36

Other:



Company Name		First Name	Su
Trelleborg Applied Technologies		Kerry	Lyc
TOOLING SPECIALITIES		TOOLING SERVICE	S
Assembly and fixture tooling	lacksquare	Ancillary tooling supplier	S
Bespoke complex tooling	\bullet	(eg vac bags, tapes)	
Dies and cutting tools		Associations, Third Partie Services & Consultants	es,
Inflatable mandrels		Devices and sensors for p	oroce
Large scale tools (greater than 10m)	lacksquare	measurement and mana	gem
Press moulding	\bullet	(metrology, process mea	isure
Rapid product development	ullet	RTOs and academia	
Reconfigurable tooling		Tooling designer	
Reusable silicone testing		Tooling manufacturer	
Self-heated tooling	\bullet	Tooling end-user	
Smart tooling	lacksquare	Tooling integrator	
Systems, robotic and automation		Tooling material supplier	
Other:			

KerryLyons TOOLLING SERVICES Ancillary tooling suppliers (eg vac bags, tapes)IAssociations, Third Parties, Services & ConsultantsIDevices and sensors for process measurement and management (metrology, process measurement, etc)IRTOs and academiaITooling designerI	
Ancillary tooling suppliers (eg vac bags, tapes)Image: Complete StateAssociations, Third Parties, Services & ConsultantsImage: Complete StateDevices and sensors for process measurement and management (metrology, process measurement, etc)Image: Complete StateRTOs and academiaImage: Complete StateImage: Complete State	
(eg vac bags, tapes)Associations, Third Parties, Services & ConsultantsDevices and sensors for process measurement and management (metrology, process measurement, etc)RTOs and academia	
Services & ConsultantsDevices and sensors for process measurement and management (metrology, process measurement, etc)RTOs and academia	
measurement and management (<i>metrology, process measurement, etc</i>) RTOs and academia	
Tooling designer	
Tooling manufacturer	•
Tooling end-user	
Tooling integrator	
Tooling material supplier	

kerry.lyons@trelleborg.com

Email

PRODUCTS	
Cabin interiors	
Empennage	
Engine components	
Fan/propeller/rotor system	
Fuselage	
Landing gear systems	
Nacelle & pylon	
Wings	
Other: Supply Tooling	



Company Name	First Name	Surname		Email
University of Bristol	Carwyn	Ward		c.ward@bristol.ac.uk
TOOLING SPECIALITIES	TOOLING SERV	ICES		PRODUCTS
Assembly and fixture tooling	Ancillary tooling sup	pliers		Cabin interiors
Bespoke complex tooling	(eg vac bags, tapes)			Empennage
Dies and cutting tools	Associations, Third F Services & Consultar			Engine components
Inflatable mandrels	Devices and sensors	for process		Fan/propeller/rotor system
Large scale tools (greater than 10m)	measurement and n	nanagement		Fuselage
Press moulding	(metrology, process	measurement, etc)		Landing gear systems
Rapid product development	RTOs and academia		\bullet	Nacelle & pylon
Reconfigurable tooling	Tooling designer			Wings
Reusable silicone testing	Tooling manufacture	er		Other: R&D
Self-heated tooling	Tooling end-user			
Smart tooling	Tooling integrator			
Systems, robotic and automation	Tooling material sup	plier		
Other: R&D				

Other:



Company Name		First Name
Vertical Advanced Engineering		Chris
TOOLING SPECIALITIES		TOOLING SERVIC
Assembly and fixture tooling	lacksquare	Ancillary tooling suppli
Bespoke complex tooling	\bullet	(eg vac bags, tapes)
Dies and cutting tools		Associations, Third Par Services & Consultants
Inflatable mandrels		Devices and sensors fo
Large scale tools (greater than 10m)		measurement and mar
Press moulding		(metrology, process m
Rapid product development	lacksquare	RTOs and academia
Reconfigurable tooling		Tooling designer
Reusable silicone testing		Tooling manufacturer
Self-heated tooling		Tooling end-user
Smart tooling		Tooling integrator
Systems, robotic and automation		Tooling material suppli
Other:		

st Name	Surname	
ris	Harley	
OLING SERVICE	S	
cillary tooling suppliers (<i>vac bags, tapes</i>)	5	\bullet
sociations, Third Parties vices & Consultants	S,	•
vices and sensors for p easurement and manag etrology, process meas	gement	
Os and academia		
oling designer		$oldsymbol{0}$
oling manufacturer		0
oling end-user		
oling integrator		
oling material supplier		

chris.harley@vertical-advanced-engineering.com

Email

PRODUCTS	
Cabin interiors	
Empennage	
Engine components	
Fan/propeller/rotor system	
Fuselage	
Landing gear systems	
Nacelle & pylon	
Wings	
Other: Design services for products and tooling	



Other:

Company Name		First Name	Surname
Waukesha Foundry		Joe	Mannion
TOOLING SPECIALITIES		TOOLING SERVIO	CES
Assembly and fixture tooling		Ancillary tooling suppliers (<i>eg vac bags, tapes</i>) Associations, Third Parties, Services & Consultants	
Bespoke complex tooling			
Dies and cutting tools	•		
Inflatable mandrels		Devices and sensors for process measurement and management (<i>metrology, process measurement, etc</i>)	
Large scale tools (greater than 10m)	ullet		
Press moulding	•		
Rapid product development	lacksquare	RTOs and academia	
Reconfigurable tooling		Tooling designer	
Reusable silicone testing		Tooling manufacturer	
Self-heated tooling	•	Tooling end-user	
Smart tooling	lacksquare	Tooling integrator	
Systems, robotic and automation		Tooling material suppl	ier
Other:			

		Email
		joe.mannion@eurolink.com
		PRODUCTS
		Cabin interiors
		Empennage
		Engine components
		Fan/propeller/rotor system
		Fuselage
		Landing gear systems
		Nacelle & pylon
		Wings
	\bullet	Other:

